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Exhibit R-2, RDT&E Budget Item Justification					Date: February 1999				
APPROPRIATION/BUDGET ACTIVITY RDT&E / BA4					R-1 ITEM NOMENCLATURE Ship Self Defense / 0603755N				

COST (\$ in Millions)	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	Cost to Complete	Total Cost
Total P.E. Cost	9.253	12.120	5.654	7.707	7.827	7.960	8.125	8.292	CONT.	CONT.
QRCC / K2133/U2133	3.328	4.351	0	0	0	0	0	0	0	101.520
Force AAW Coord. Tech. (FACT)/ K2184/U2133	5.925	7.769	5.654	7.707	7.827	7.960	8.125	8.292	CONT.	CONT.
Quantity of RDT&E Articles & cost										

A. (U) Mission Description and Budget Item Justification:

This program incorporates efforts dedicated to the enhancement of ship self defense against Anti-Air Warfare (AAW) threats. Its primary focus is on the development of technologies, systems, and procedures necessary to defeat the evolving Anti-Ship Cruise Missile (ASCM) threat. These projects focus on ship defense improvements through the development of advanced concepts and capabilities that will enhance both defense in depth of ships in a force and self defense of individual ships in a littoral war-fighting environment. Quick Reaction Capability (QRCC), Project K2133, provides advanced concepts and technology developments for the multi-sensor integration of ship detection equipment, integration and coordination of ship self defense weapons, and coordination of hardkill and softkill assets to improve individual ship self defense capabilities against the ASCM threat. Force Anti-Air Warfare Coordination Technology (FACT), Project K2184, demonstrates Force Anti-Air Warfare (AAW) concepts and capabilities which will enhance the AAW war-fighting ability of ships and aircraft and enable the coupling of the Force into a single, distributed AAW weapon system through more effective use of tactical data, and force sensors and weapons.

B. (U) Program Change Summary:

	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>
FY 1999 President's Budget:	9.597	12.337	12.287
Appropriated Value:	9.961	12.337	
Adjustment to FY 1998 Appropriated Value/ FY 1999 President's Budget:			
a. Congressional Undistributed Reduction	-0.364		
b. FY98 SBIR Reduction	-0.211		
c. Minor Pricing Adjustments	-0.133	-0.217	-0.100
d. Program Reduction			-2.000
e. Accelerate MFP Capability			-4.533
FY 2000 PRES Budget Submit:	9.253	12.120	5.654

Funding FY98 and FY99 reductions are due to minor pricing adjustments. FY2000 reductions due to Program Reduction (-\$2.0), Acceleration of MFP Capability (-\$4.533) and minor pricing adjustments (-\$.1).

:

Schedule: Not applicable.

Technical: Not applicable.

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Exhibit R-3 Cost Analysis		Date: February 1999
APPROPRIATION/BUDGET ACTIVITY RDT&E 4	PROGRAM ELEMENT NAME AND NUMBER SHIP SELF DEFENSE 0603755N	PROJECT NAME AND NUMBER FORCE AAW COORDINATION TECHNOLOGY K2184/U2184

Cost (\$ in Millions)	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	Cost to Complete	Total Cost
Project Cost	5.925	7.769	5.654	7.707	7.827	7.960	8.125	8.292	CONT.	CONT.
RDT&E Articles Qty										
<p>A. (U) Mission Description and Budget Item Justification: Force Anti-Air Warfare Coordination Technology (FACT) Program is an advanced development effort designed to demonstrate Force Anti-Air Warfare (AAW) concepts and capabilities which will significantly improve our Force defense in depth, including both local area and self defense capabilities against current and future AAW threats. FACT improvements are designed to enhance the AAW warfighting ability of ships and aircraft and to enable coupling of the Force into a single, distributed AAW weapon system and towards more effective use of tactical data and the cooperative use of all the force sensors and weapons. These capabilities will provide the ship defense flexibility needed to meet the threat brought about by increasing numbers of highly sophisticated weapons held by potentially hostile third world countries. FACT defines requirements and develops prototype systems or modifications to existing systems to test new concepts for the coordination of Force AAW operations. Some examples of prototype systems now in production are AN/SPS-48C Detection Data Converter, AN/SPS-48E Environmental Control Feature, Shipboard Gridlock System Automatic Correlation (SGS/AC) and Dial-a-Track Link-11 Quality Selection. Other FACT developments nearing production stages are the Automatic Identification System (Auto-ID) and the Multi-Frequency Link-11 capability; Dual Net Multi-Frequency Line (DNMFL); Force Threat Evaluation Weapons Assignment (FTEWA); and the prototype Area Air Defense Commander (AADC) capability. Short and long term objectives will be phased in to produce higher degrees of ship defense and battle coordination and effectiveness.</p> <p>(U) PROGRAM ACCOMPLISHMENTS AND PLANS:</p> <p>(U) FY 1998 ACCOMPLISHMENTS:</p> <ul style="list-style-type: none"> . (U) (\$ 4.375) Continued AADC concept development and evaluation, including the integration of Theater Ballistic Missile Defense (TBMD) capabilities into the prototype AADC. . (U) (\$ 1.050) Supported DNMFL experiments in the IKE Battle Group, USS Cowpens, and US LaSalle; support FTEWA experiments in the USS Cowpens and USS LaSalle; support AADC experiments in Joint air defense exercises. . (U) (\$.500) Supported Link 11, Link 16 and CEC interoperability across Joint and Allied forces, including multiple simultaneous links, and participation in Link Inter-operability Working Group (LIWG) and BattleGroup System Integration Testing (BGSIT) efforts. 										

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Exhibit R-3 Cost Analysis		Date: February 1999
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(U) FY 1999 PLAN

- . (U) (\$ 4.500) Continue AADC concept development and evaluation, including the integration of air space deconflict capabilities, combat air patrol (CAP) stationing, Engage on Remote (EOR), and AEGIS weapons system integration.
- . (U) (\$ 1.574) Support DNMFL experiments in IKE Battle Group, USS LaSalle; support AADC experiments with the AADC prototypes at land based facilities and at-sea.
- . (U) (\$ 1.000) Begin development of Coherent Track Processor to integrate CEC, Link 11, and Link 16.
- . (U) (\$.500) Support Navy and Joint link interoperability
- . (U) (\$.195) Portion of extramural program is reserved for Small Business Innovation Research assessment in accordance with 15 USC 638.

(U) FY 2000 PLAN:

- . (U) (\$ 2.248) Continue concept development of advanced air defense command and control capabilities, including development of concepts to support CAP/SAM coordination, Joint Fires airspace coordination, coordinated cooperative engagements, and advanced air defense capabilities.
- . (U) (\$ 1.365) Support landbased and at-sea experiments of advanced Command and Control systems to evaluate air defense concepts and capabilities, including multi-TADIL operations, and air defense operations.
- . (U) (\$ 1.541) Develop concepts and capabilities to support the integration of Multi-TADIL and cooperative engagement networks across Joint air defense systems.
- . (U) (\$.500) Improve Navy and Joint Link interoperability.

B. (U) Other Program Funding Summary: Not applicable.

					To	Total			
<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>Complete</u>	<u>Cost</u>

C. (U) Acquisition Strategy: Not applicable.

D. (U) Schedule Profile: Not applicable

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Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY99 Cost	FY99 Award Date	FY00 Cost	FY00 Award Date			Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development		APL/LAUREL, MD	50.408	7.769	10/98	5.654	10/99			CONT.	CONT.	CONT.
Ancillary Hardware Development												
Systems Engineering												
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development			50.408	7.769	10/98	5.654	10/99			CONT.	CONT.	CONT.
Remarks:												
Development Support Equipment												
Software Development												
Training Development												
Integrated Logistics Support												
Configuration Management												
Technical Data												
GFE												
Subtotal Support												
Remarks: Not Applicable												

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Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total <u>PYs</u> Cost	FY99 Cost	FY99 Award Date	FY00 Cost	FY00 Award Date			Cost To Comple e	Total Cost	Target Value of Contract
Developmental Test & Evaluation												
Operational Test & Evaluation												
Tooling												
GFE												
Subtotal T&E												
Remarks Not Applicable												
Contractor Engineering Support												
Government Engineering Support												
Program Management Support												
Program Management Personnel												
Travel												
Labor (Research Personnel)												
Overhead												
Subtotal Management												
Remarks: Not Applicable												
Total Cost			50.408	7.769	10/98	5.654	10/99			CONT.	CONT.	CONT.
Remarks:												

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